





The Psychological Screening of Potential Accessions: General Principles of Good Practice

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HISTORY

- 1. Yerkes, Terman, Doll, Goddard et Al. 1917.**
- 2. Arthur Otis donates his unpublished IQ test to the Army.**
- 3. Army psychologists develop the Army Alpha and Beta Test Batteries.**
- 4. Even prior to WWI, psychologists had begun to develop tests of “special aptitude”.**
- 5. Woodworth, during WWI develops the Personal Data Sheet, as a screen for severe neuroses.**
- 6. 1940's : Psychologists begin developing “multiple aptitude test**



HISTORY

- 7. WWII: Psychologists develop “performance” or “situational” tests to assess complex and subtle social and emotional behavior. These tests were used by the Office of Strategic Services (OSS).**
- 8. WWII: the field of human factors (i.e. human engineering, engineering psychology, ergonomics) arose.**



“Clinical” versus “Actuarial” Prediction



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Reliability

- a. Coefficient of stability**
- b. Inter-rater reliability**
- c. Internal consistency**



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Validity:

Content Validity

Criterion Validity



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Prevalence: the probability of a given problem in the entire population of interest.

Incidence: the probability that an individual recruit will display that problem.



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Sensitivity: the degree to which a test actually predicts problems.

Specificity: the degree to which a test accurately identifies those who will not display the problem.

Specificity + Sensitivity = Hit Rate

False Positives and False Negatives



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Positive Predictive Power: the degree to which the test identifies individuals with the problem in relation to the prevalence of the problem.

Negative Predictive Power: the degree to which the test accurately identifies those without the problem given the prevalence of the problem.



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Proper Norms



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Adverse Impact



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Dealing with Dissimulation

- Norms for “Fake Good” and “Fake Bad” profiles: analogue studies and profile matching.
- Validity scales.
- Reaction times.



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Reading Level



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Test Security



“Screening Out” versus “Screening In”



SUMMARY

To be most useful, a test must:

- 1. Have demonstrated reliability,**
- 2. Have demonstrated validity,**
- 3. Have demonstrated specificity,**
- 4. Have demonstrated sensitivity,**
- 5. Have demonstrated positive predictive power,**
- 6. Have demonstrated negative predictive power,**
- 7. Have norms appropriate to the population being studied,**
- 8. Have mechanisms to identify dissimulation.**



SUMMARY

To be most useful, a test must be:

- 1. Employ actuarial scoring and interpretation methods,**
- 2. Employ multivariate methods,**
- 3. Be free of adverse impact, with certain exceptions,**
- 4. Be constructed at an appropriate reading level,**
- 5. Predict the problem at a level higher than chance (incremental validity).**

QUESTIONS?





Thank You!

